WT-1010

GSM For Alarm System

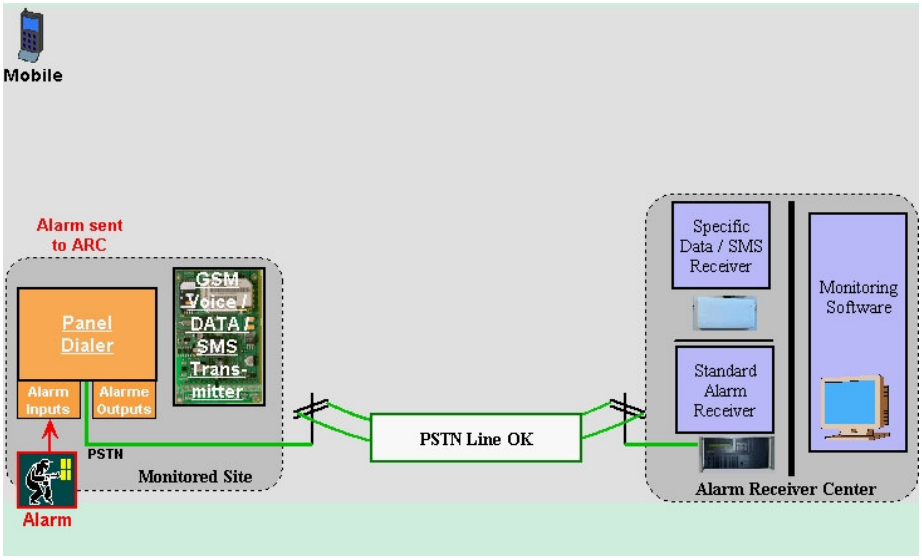
User Manual

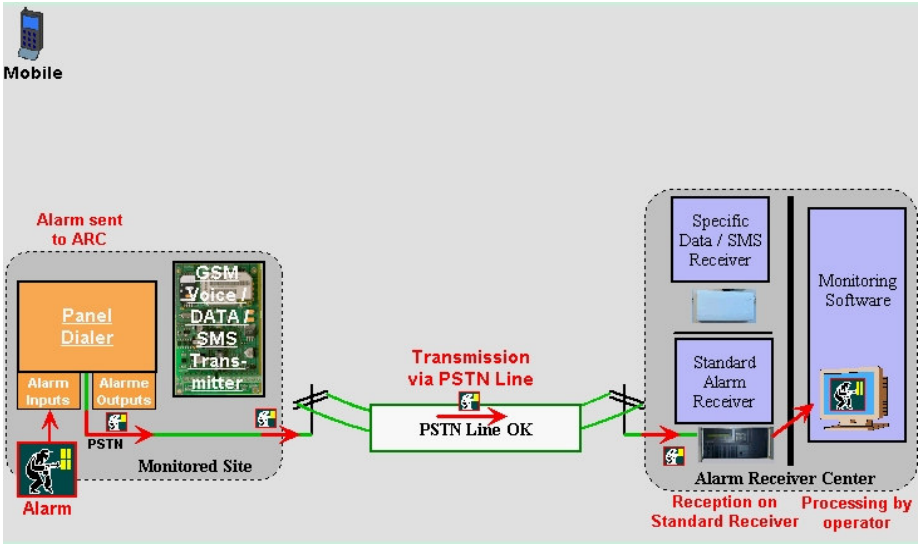
INHEP DIGITAL SECURITY

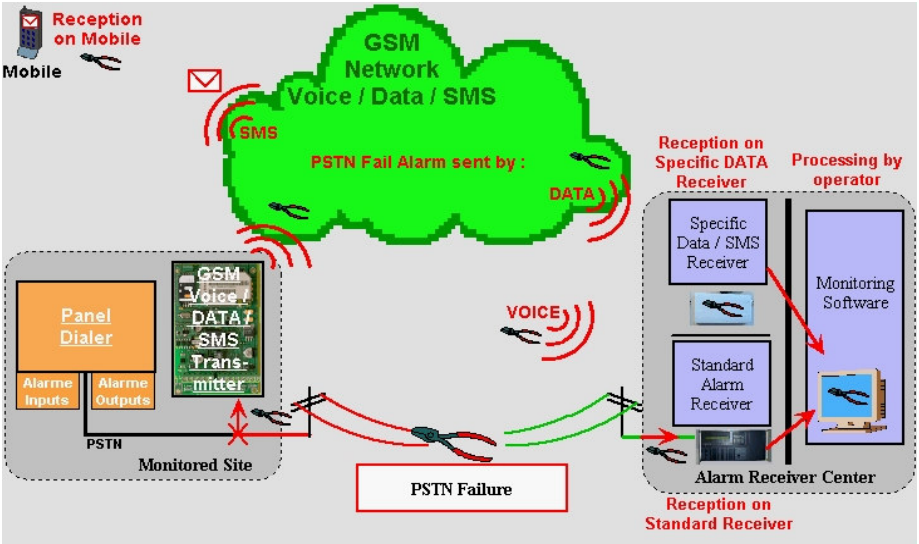
WT-1010 GSM For Alarm System

The **WT-1010** GSM Terminal is a wireless communicator for alarm and fire panels that uses the cell phone network (GSM) to transmit alarms and other panel event. The module checks the status of the PSTN line and in case the PSTN line becomes unavailable, the **WT-1010** GSM emulate the line signal to the panel. At this time, the panel will dial out using the GSM cell phone network to communicate with the receiver at the monitoring station and transmit the alarms.

GENERAL OVERVIEW







FEATURES

1. Panel compatibility - Allows any contact ID alarm panel to transmit alarms over GSM using the GSM voice channel

2. Works over the GSM cell phone networks Units can be used wherever there is cell phone coverage

3. Telephone line backup: **WT-1010** give priority to the lowest cost network. **WT-1010** uses the telephone line as the main transmission line and uses the GSM voice channel as backup

4. The **WT-1010** units can continuously watches if a Contact ID is directed towards the security monitoring station through the wired or GSM network, and if either of the preset report codes is noticed, it sends an appropriate SMS message with definable text to a mobile phone numbers. Using this function, the owner can get instant SMS messages not only of alarms but also every event of closing/opening.

5. Sends text messages to user programmable cell phone number (SMS): The **WT-1010** can be programmed to send a SMS to a programmable cell phone number to notify the user that the PSTN line has been cut off or unavailable.

6. Low power consumption - uses 30mA while in idle state and 260mA when transmitting an alarm

7. Wall mounting enclosure available: The WT-1010 units can be installed inside alarm panel or inside its own wall mount enclosure.

SKETCH OF THE WT-1010

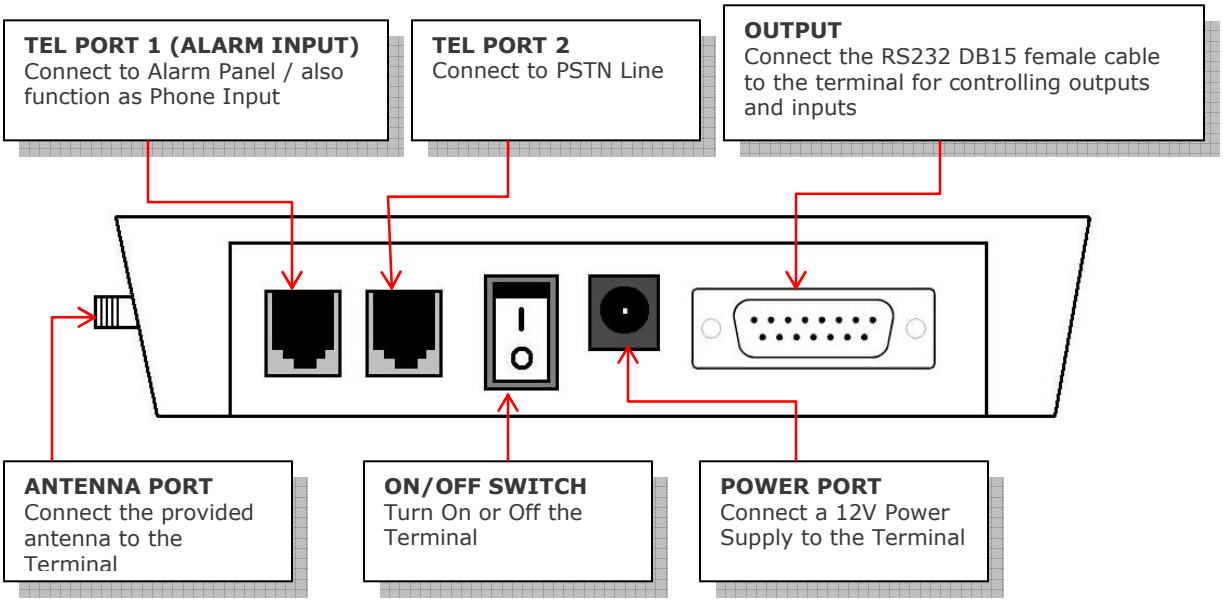
The WT-1010 GSM –Alarm System

Frontal view

LED INDICATORS

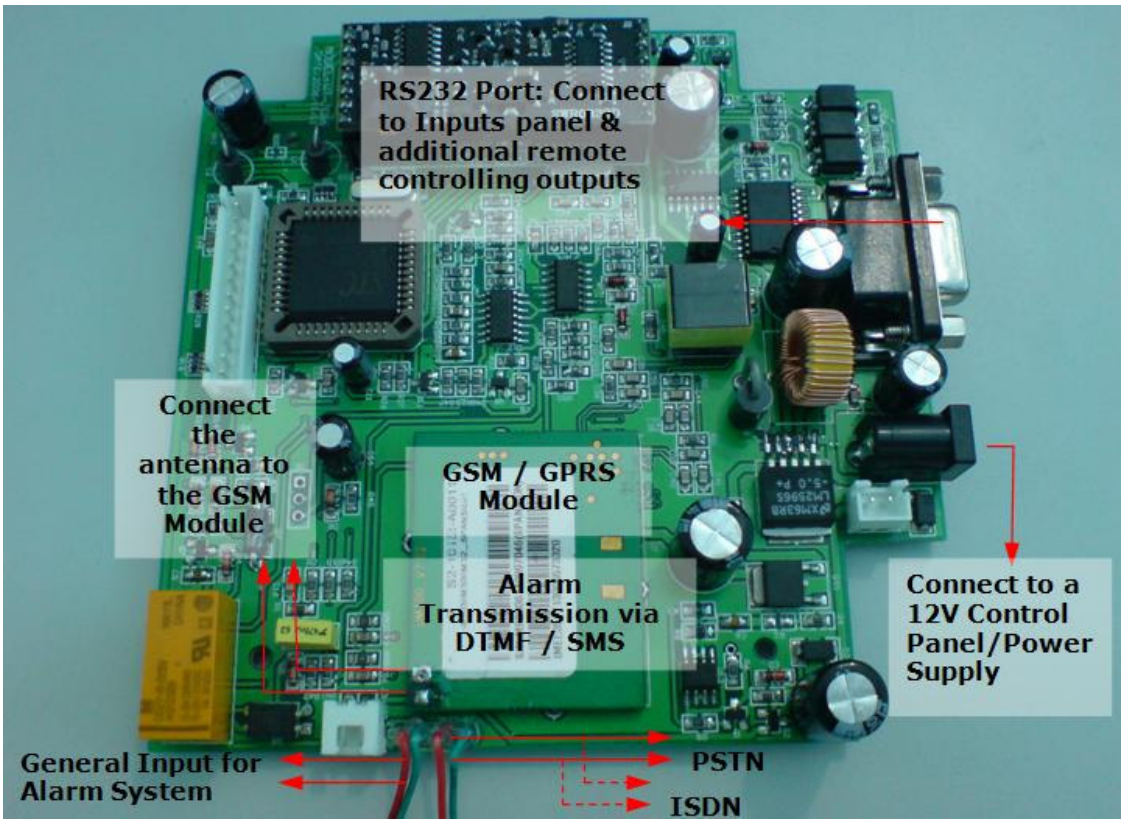
LED1 - Power indicator (it's lit while power source is connected correctly)

LED1 - Signal indicator (Stays lit indicates that the terminal is on GSM network. Stays off indicate that the terminal has failed to search for GSM network.)

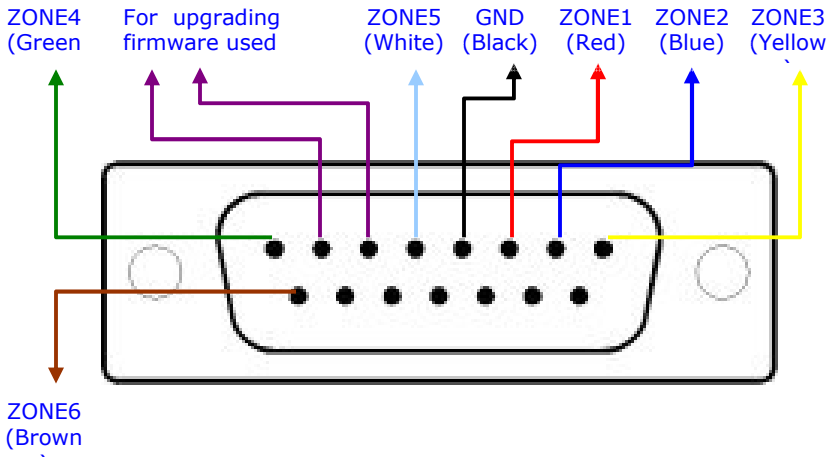

TEL PORT 1 (ALARM INPUT)
Connect to Alarm Panel / also function as Phone Input
TEL PORT 2
Connect to PSTN Line
OUTPUT
Connect the RS232 DB15 female cable to the terminal for controlling outputs and inputs
ANTENNA PORT
Connect the provided antenna to the Terminal
ON/OFF SWITCH
Turn On or Off the Terminal
POWER PORT
Connect a 12V Power Supply to the Terminal

Rear view

WT-1010 WIRING DIAGRAM


RS232 Port: Connect to Inputs panel & additional remote controlling outputs
Connect the antenna to the GSM Module
GSM / GPRS Module
Alarm Transmission via DTMF / SMS
Connect to a 12V Control Panel/Power Supply
General Input for Alarm System
PSTN
ISDN

WT-1010 RS232 WIRING DIAGRAM (On WT-1010)



WT-1010 WIRING

1. **Antenna**: connect the antenna to the GSM module; place the antenna as far as possible from the WT-1010 and do not leave any coiling of the antenna cable to avoid radiant interference

2. **SIM Card**: disable the PIN code and set it to 1234 (default)

   For Transmitter Mode (Data or SMS): as with any transmitter, it requires an identifier, receiver telephone numbers, etc (refer to the complete information on Programming page)

3. **Line Input**: connect the line input to the PSTN or ISDN network.

4. **Outputs (Back-Up Mode)**: connect the RS232 to additional remote controlling outputs.

5. **Alarm Input**: connect the input to output of the Alarm Panel / Control Panel.

6. **Power Supply**: connect to a 12V power supply

7. **Operating State**: Approximately 20s after power up, check the operating state indicated by the Power LED: the LED is steady during power up phase, then blinks when the connection to the GSM network is established. The Signal indicator LED will stay lit whenever there is signal.

WT-1010 RS232 WIRING

ZONE1(Red), ZONE2 (Blue), ZONE3 (Yellow) Remote Controlling Outputs

Connect ZONE1, ZONE2 and ZONE3 to additional outputs for remote controlling. These open collector outputs (**that can sink max 300ma per output**) can be turned on and off remotely through a SMS. You can use them to pull to ground your inputs. Remote control will be reachable by sending a SMS with a certain command.

Note: When sending normal SMS with command below, the WT-1010 will turn On / Off the output and reply a message of output has turned On / Off to a programmable phone numbers. Refer to Setting for User's Mobile Phone Number & SMS Center on Programming Setting page below.

Command	Description	Reply from WT-1010
AT+ZONE1=1	Turn on ZONE1	ZONE1 ON
AT+ZONE1=0	Turn off ZONE1	ZONE1 OFF
AT+ZONE2=1	Turn on ZONE2	ZONE2 ON
AT+ZONE2=0	Turn off ZONE2	ZONE2 OFF
AT+ZONE3=1	Turn on ZONE3	ZONE3 ON
AT+ZONE3=0	Turn off ZONE3	ZONE3 OFF

ZONE4 (Green), ZONE5 (White), ZONE6 (Brown) Inputs

Connect ZONE4, ZONE5 and ZONE6 to inputs panel, when there is a short-circuit impulse on (ZONE4, ZONE5, ZONE6). the WT-1010 is possible to send SMS to a programmable phone numbers.

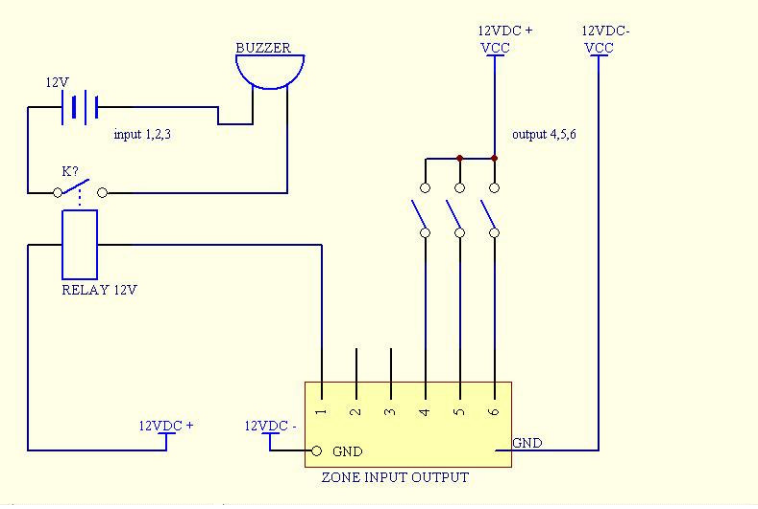
For Example: **ZONE4** is connected to a electrical door, when there is intruder or the electrical door is opened illegally, WT-1010 will receive short-circuit impulse on **ZONE4** and will automatically send a signal to the monitoring station and also send a SMS to notify the owner.

PROGRAMMABLE ALARM SMS

User is able to change the content of alarm SMS for **ZONE4**, **ZONE5** and **ZONE6**. **For Example**: **ZONE4** is connected to garage door and programmed as **Garage Opened!**, when **ZONE4** is triggered, owner will receive a SMS **Garage Opened!**

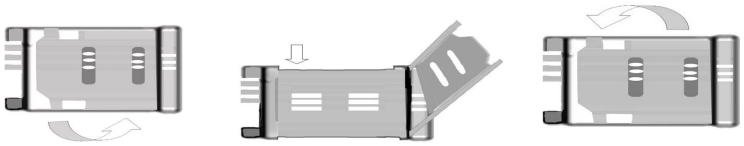
Note: When sending normal SMS with command below to the WT-1010, it will reply a message to a programmable phone number indicate that the setting has changed successfully.

Command	Description	Reply from WT-1010
IN1Text Messages*	Allow user to change the content of alarm message for inputs up to 19 characters	Changed Done
IN2Text Messages*		Changed Done
IN3Text Messages*		Changed Done
ALL	Erase all programmed text messages	Erased Done



Inputs And Outputs Wiring Diagram

INSTALLING THE SIM CARD



Proceed as follows:

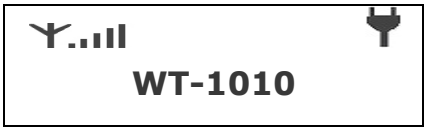
1. Slide back the SIM door and lift it up
2. Slide the SIM card into the SIM door making sure that the clipped corner of the SIM card lines up with the clipped corner of the SIM holder
3. Close the SIM door
4. Slide the SIM door to lock the SIM card in place

POWER UP THE WT-1010

When power up the WT-1010, it will display as below

SETTING>>>>>

When the terminal is ready to use, it will display as below



PROGRAMMING CODE SETTING

(Have To Enter Password Before Start Doing The Settings)

Note: To start with programming, user must plug-in a normal single line phone to TEL1 (Port 1)

Steps:

1. **Password Verification**

   Pick up phone, press ****83211279#.** If heard "du~~~" a continuous dialing tone, means the Password entered correctly, and then will continue to go into programming setting mode. User is able to change the settings now. If there is no continuous "du~~~", means the Password enter not correct. And it will not go into programming setting mode to change the settings. User can hook-on and pick up phone again to enter the Password.

2. **Programming Code**

   Refer to the Programming Table below. After enter the Programming Code, if you heard a busy tone follow by the dialing tone, it means wrong programming code. If heard continuous "du~~~", it means the successful set up for that programming code. If just heard dialing tone, it means that the settings area are full or enter wrong programming code.

   During the setting for the programming code, user does not need to hook-on the Phone. When user heard dialing tone after ONE setting means the user can continue the following setting.

3. **To Quit from the Programming Code Setting**

   In Hook-on mode or Press "**hand-free**" to quit from the setting.

No.	Definition	Program Code	Description
1	Enter Password. Go into Programming Setting	**XXXXXXXX#	After Password Verification, will enter to the Programming Setting Mode. (Initial Password for factory leaving is sets up as "83211279")
2	Setting for Changing Password	*6*XXXXXXXX#	Before doing this setting, user will need to use the default password "83211279" to go into Programming Setting Mode to be able to use this programming code to change the password.
3	Setting for User's Mobile Phone number	*7*XXXXXXXXXXX#	After programmed the mobile phone number, the terminal is able to send Alarm SMS to alert the user notify that the PSTN line of the Alarm System has been cut off or unavailable.
	Erase User's Mobile Phone number	*7*#	Dial this code will erase User's Mobile Phone number from WT-1010 memory.
4	Setting for SMS Center number	*8*XXXXXXXXXXX#	After setting SMS Center number, the terminal will be able to send SMS. For Example: SMS Center No. +1234567890 Press ***8**1234567890#**
	Erase SMS Center number	*8*#	Dial this code will the erase SMS Center number from WT-1010 memory.

4. Checking the GSM Service Status of W-1010

When the GSM link is completely lost by disconnection from the GSM network, the alarm cannot be sent via GSM by WT-1010. User can always check the WT-1010 GSM Service by sending SMS to the WT-1010. If the WT-1010 GSM Service is available it will receive the message and will automatically reply the user. If the GSM Service failed, it will not reply the user. To check network status, send **AT010*#** (normal SMS) to the WT-1010. If the GSM Service is available it will reply "**GSM OK**".

VERIFICATIONS AND TESTS

Line Detect:

Simulate a line failure: disconnect the PSTN line from line port of WT-1010, and the transmission of the PSTN fail alarm by WT-1010 will be sent. Check that the SMS has been sent to the mobile recipient (if SMS transmission is programmed).
Reconnect the line: Check the transmission of PSTN line restore by the WT-1010 to the GSM Data receiver of the Monitoring Station.
Simulate both GSM and PSTN failure: take out the SIM card from the WT-1010 and disconnect the PSTN line, check that the voltage on GSM & PSTN failed Output that will trigger the Alarm Siren.

TECHNICAL SPECIFICATIONS

General

- SIM300 GSM/GPRS Module with 0dB antenna (2, 5m)
- Optional accessory: remote antenna 10m cable 2dB gain, Marine Type with FME/MMCX connector
- CE Intrusion Product

Compatibility

- Compatible in GSM Voice communications with any DTMF Control Panel (including speech synthesis Panels) and any landline alarm receiver
- Compatible in SMS transmission to any mobile phone (text formatted SMS) and to any SMS receiver, RD-id Type (Contact-ID formatted SMS)
- Compatible for GSM Data Communications with the specific GSM Data receiver Modex or Quasar

Power

- Nominal voltage: 12V

Dimensions and Weight

- L x W x H: 25 x 14 x 6 cm
- Weight: 1.5Kgs

Environmental Specifications

- Environment temperature: 32° to 120° F
- Relative humidity: Maximum 95%

Inputs and Outputs

- Number of Outputs: 3
- Output type: Open Collector
- Max. current for inputs: 1A